

Aurum – Project Summary



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1 Background

1.1 Introduction

In January 2011, Aurum Ventures Private Limited ("**Aurum**") has been awarded a power purchase agreement for a 20MWe solar thermal power plant (the "**Plant**" or "**Power Station**") under Phase 1 of the Indian Jawaharlal Nehru National Solar Mission program ("**JNNSM**"). Aurum has committed to complete construction of the Plant and deliver electricity to the Indian grid by 11 May 2013. The project is located in the province of Gujarat, India.

Aurum has requested Indure Private Limited ("**Indure**") in conjunction with Novatec Solar GmbH ("**Novatec**") as technology provider to submit a bid for the turnkey delivery of the Power Station. Indure would assume the role of the EPC contractor. As subcontractor to Indure, Novatec would deliver a solar field based on its Supernova linear Fresnel technology (the "**Solar Field**") which would produce sufficient steam to run the Plant.

1.2 The Indian JNNSM Program

The Indian government has started Phase I of the JNNSM program on 17th August 2010. During this phase PPAs for a total of 500 MWe were offered to CSP developers. The developers were invited to submit a tariff at which they were willing to construct the power plants.

The basis for the bidding process was a benchmark tariff of 15.31 Rs/kWh derived by a framework which in the government's opinion reflected the actual market price for the construction of a CSP plant. In total more than 70 project developers have been accepted by the Government during the bidding process as appropriate project developers.

Out of a total of 70 companies which submitted bids, seven were selected by the government for the first 500MWe allocated under the JNNSM program. The selected companies are listed in the table below.

No.	Company Name	Capacity (MW)	Tariff (INR/kWh)	Tariff (EURO-Cent/kWh)
1.	Lanco Infratech Ltd	100	10.49	17.31
2.	KVK energy Venture pvt Ltd	100	11.2	18.48
3.	megha Engineering and infrastructure pvt	50	11.31	18.66
4.	Rajathan Sun technique Energy pvt Ltd	100	11.97	19.75
5.	Aurum Renewable Energy pvt Ltd	20	12.19	20.11
6.	Godawari Power and Ispat Ltd	50	12.2	20.13
7.	Corporate Ispat Alloy Ltd	50	12.24	20.20

On 11 January 2011 the successful bidders signed PPAs with NTPC Vidyut Vyapar Nigam Ltd ("**NVVN**"), a trading subsidiary of National Thermal Power Corporation Limited, the largest state-owned power generating company in India. All solar power plants have to be synchronized 28 months after the PPA signing date (11 May 2013).

2 The Project

2.1 Project Description

Total project costs are approximately 49m EUR equivalent. The EPC package accounts for around 37m EUR which includes 26m EUR for the Solar Field.

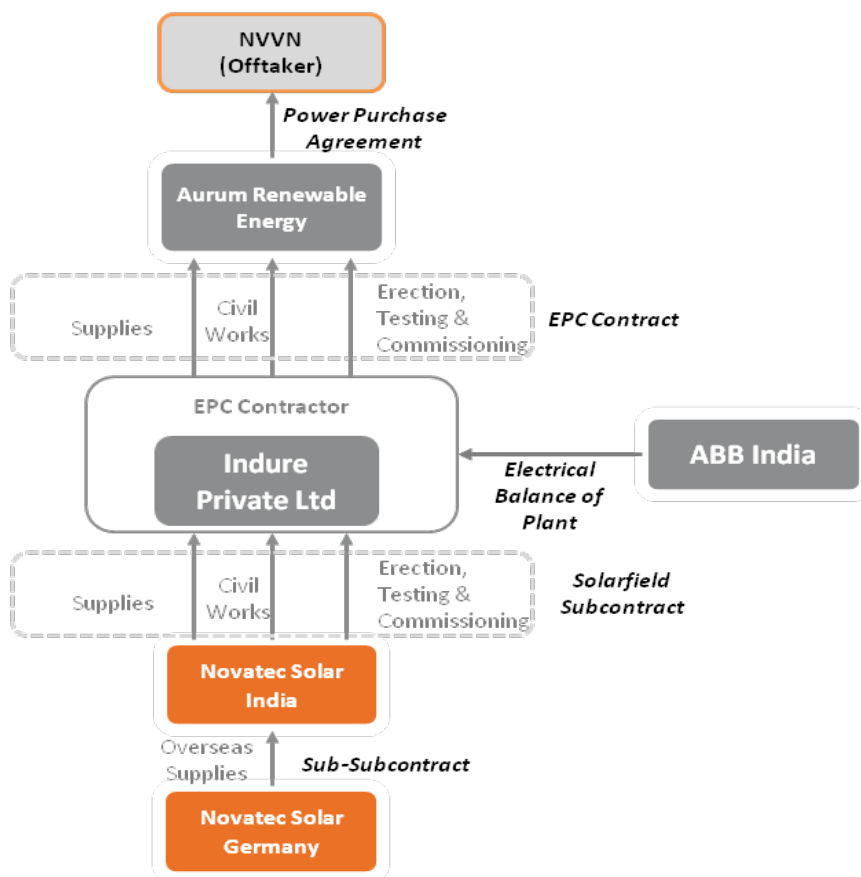
The project design will be based on integrating linear Fresnel technology with a 23MW superheated steam turbine. The steam parameters on the turbine inlet allow for 500°C and 90 bar. The Solar Field is planned to have in line steam separators in each solar field row to divide the mirror surface into an evaporation section (app. 72%) and a superheating section (app. 28%). The total Solar Field size is approximately 170,000 m².

The power block will use wet cooling towers. Approvals for the water consumption were qualification criteria for the program and are in place, as confirmed by Aurum.

2.2 Project Structure

The owner of the plant will be Aurum Renewable Energy Private Limited. The off-taker is NVVN, who entered into a PPA with the project company for a term of 25 years guaranteeing the allocated fixed tariff. Indure is acting as EPC contractor and single point of contact to Aurum. The solar field would be delivered by Novatec through its Indian and German entities. The electrical balance of plant is intended to be supplied by ABB India.

The preliminary project structure is outlined in the diagram below.



2.3 Project Parties and Roles

The intended key project parties, their roles and the allocated scope are summarised in the following table.

Party	Role	Scope
Aurum	Project Owner	n/a
NVVN	Off-Taker	n/a
Indure	EPC Contractor	Balance of Plant Auxiliary Works
Novatec Solar GmbH	Foreign Solar Field Supplies	Foreign supplies Erection, testing and commissioning by imported labour Civil works
Novatec Solar India	Local Solar Field Supplier	Local supplies Erection, testing and commissioning by local labour Civil works
ABB India	EBoP Supplier	Electrical balance of plant